

METHOD OF MONITORING INTRODUCTION OF INTERFACIAL SPECIES

Abstract

A method for monitoring a nitridation process, including: (a) providing a semiconductor substrate; (b) forming a first dielectric layer on a top surface of the substrate; (c) introducing a quantity of interfacial species into the substrate; (d) removing the first dielectric layer; (e) forming a second dielectric layer on the top surface of the substrate; (f) measuring the density of interface traps between the substrate and the second dielectric layer; (g) providing a predetermined relationship between the quantity of the interfacial species and the density of the interface traps; and (h) determining the quantity of the interfacial species introduced based on the relationship.